MARINE CORPS
WARFIGHTING LABORATORY

DRAGON EYE

UNMANNED AERIAL VEHICLE

fact sheet

Dragon Eye is a 5-pound, back-packable, modular unmanned aerial vehicle (UAV) designed to provide the Marine small-unit commander with a reconnaissance and surveillance capability to see over the next hill or building. It is an important component in the Marine Corps Warfighting Lab's continuing effort to develop an intelligence, reconnaissance, and surveillance family of sensors that portrays a picture of the battlespace, enabling enhanced situational awareness for small-unit leaders on the ground.

Background: Dragon Eye is a rapid acquisition program currently managed and funded by the Marine Corps Systems Command (MarCorSysCom). The Warfighting Lab continues to support the Dragon Eye Program with technology research and insertion for further incremental upgrades. It was initially funded by the Warfighting Lab and the Office of Naval Research and was built by the Naval Research Laboratory. Dragon Eye is a direct result of the Secretary of the Navy's small UAV initiative and fulfills the Interim Small Remote Scouting System requirement supporting MarCorSysCom. The procurement contract was awarded in November 2003 to AeroVironment, Inc. MarCorSysCom will begin fielding the Dragon Eye systems in April 2004, while the Warfighting Laboratory will continue further technology insertion and experimentation.

Description: The Dragon Eye UAV is battery-operated and capable of fully autonomous flight. Made of lightweight material, it is designed to disassemble into five separate pieces and is intended to be carried in an individual Marine's pack. Dragon Eye has a 45-inch wingspan and weighs approximately 5 pounds. Missions are programmed via a wireless modem that is integrated into a 12-pound ground control station. After being launched via hand or bungee cord, Dragon Eye flies to preassigned Global Positioning System waypoints. If the operator needs to alter Dragon Eye's waypoints after launch, it has the ability to be reprogrammed in flight. Its sensors include two full-motion color and low-light cameras, each capable of transmitting video line-of-sight to a

range of 10 kilometers. Dragon Eye flies up to speeds of 35 knots and has a maximum battery endurance of one hour. Ten prototype systems were provided in support of an extended user assessment by 1st Marine Division (1STMARDIV) during Operations Enduring Freedom/Iraqi Freedom. The lessons learned from this user assessment are being used to focus the research and development at MCWL for the Dragon Eye system in the near future.

Deliverable Products: MCWL received delivery of 20 Dragon Eye systems in 2002 for operator evaluations. The prototype systems consisted of two air vehicles and one ground control station. MarCorSysCom is responsible for procurement and fielding, scheduled to begin in the spring of FY04. A fielded system will have three air vehicles and one ground control station. Target cost at full-rate production is approximately $120,000 per system. MarCorSysCom plans eventually to purchase 324 systems through FY08.

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